

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-22. (cancelled)

23. A method for merging first and second geometric primitive surfaces, both lying on a single surface, to form a single geometric primitive surface, also lying on the same surface, the first geometric primitive surface resulting from a fit to a first group of points on said single surface, and with the second geometric primitive surface resulting from a fit to a second group of points on the same single surface, said method comprising the steps of:

creating a new group of points by combining the first and second group of points;

and

fitting a new single geometric primitive surface using the new group of points whereby different portions of the same surface can be represented as a single surface.

24. A method as recited in claim 23, wherein groups of points corresponding to two planar surfaces are merged to form a single planar surface.

25. A method as recited in claim 23, wherein groups of points corresponding to two cylindrical surfaces are merged to form a single cylindrical surface.